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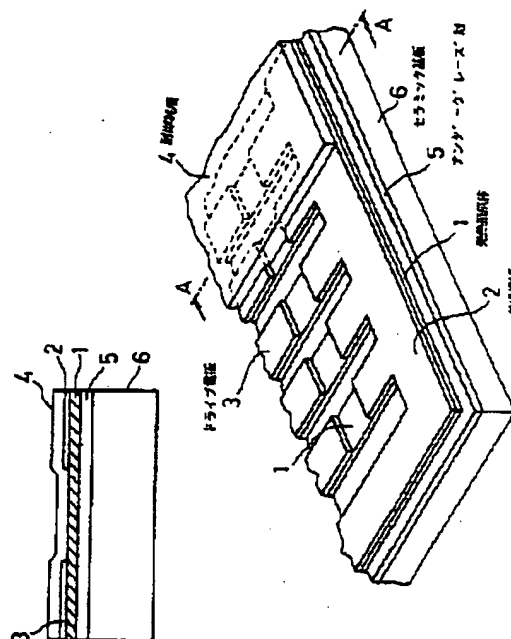
APPLICATION DATE : 16-10-90  
APPLICATION NUMBER : 02275357

APPLICANT : FUJI XEROX CO LTD;

INVENTOR : BABA KAZUO;

INT.CL. : B41J 2/335

TITLE : THERMAL HEAD AND MANUFACTURE THEREOF



ABSTRACT : PURPOSE: To make heating resistors to heat under self-control to a constant temp., uniformize the heating temp. distribution of the heating resistors to improve a dot reproducibility, and prevent the thermal breakage of the heating resistors per se by a method wherein the heating resistors in use function to be rapidly increased in resistance value to suppress a temperature increase when reaching a Curie temp.

CONSTITUTION: As a heating resistor 1, a  $\text{BaTiO}_3$  valence-control semiconductor is used. On an insulating substrate, a mixture of an organometallic material at least containing Ba and Ti is provide. The insulating substrate is burned and annealed and the grains are grown, whereby the  $\text{BaTiO}_3$  valence-control semiconductor is made polycrystalline. In this manner, with the application of a voltage, the  $\text{BaTiO}_3$  valence- control semiconductor is increased in temp. by self-heating. However, when reaching a Curie temp., it is rapidly increased in resistance value, whereby an electric current is so suppressed as to stop the temp. increase. If additive elements in the Basic, polycrystalline are uniformly dispersed, the heating temperatures of the resistors are never affected, and a variation in printing density is eliminated. Additionally, the  $\text{BaTiO}_3$  valence-control semiconductor is not heated more than a Curie temp., thus never being thermally broken if a large voltage is applied thereto by mistake.

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